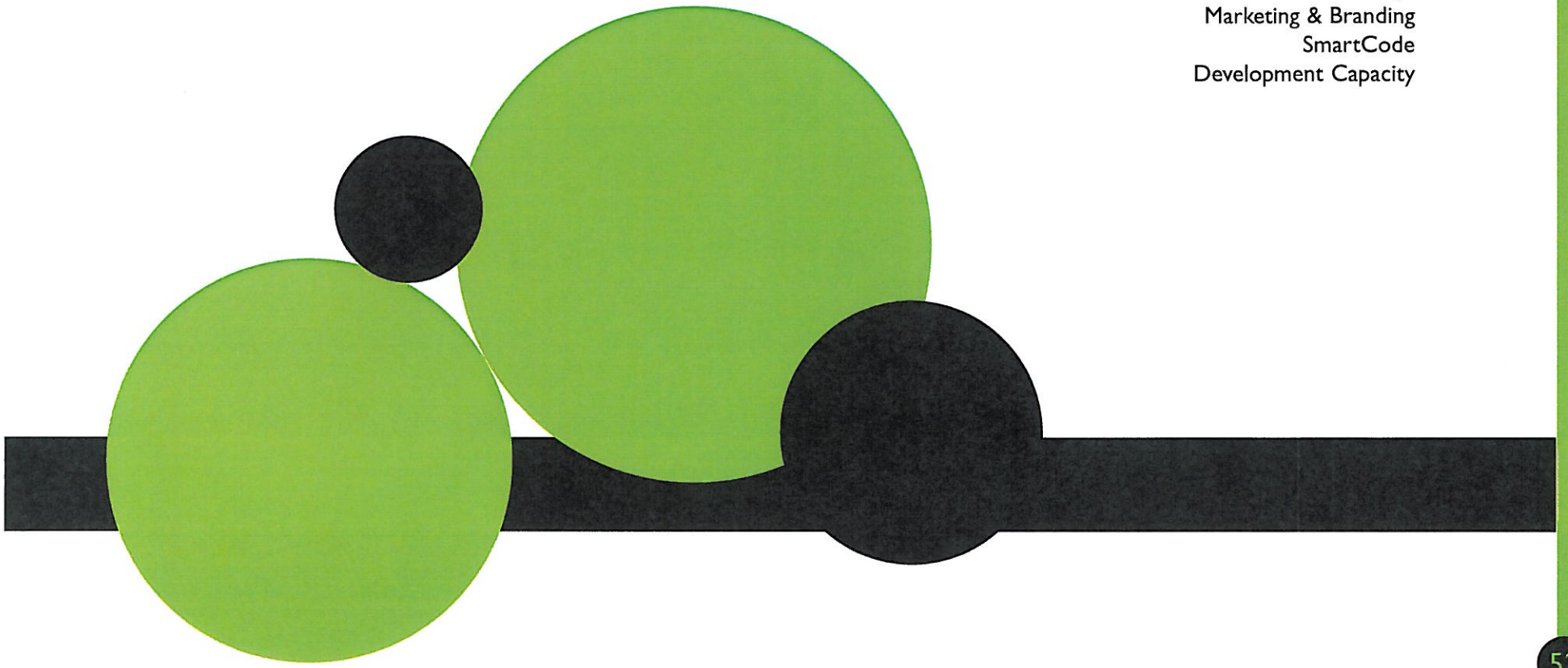
GENERAL RECOMMENDATIONS

Urban Design
Sustainable Design
Marketing & Branding
SmartCode
Development Capacity



Urban design is a vital part of the visioning and planning process. It is more comprehensive than the design of buildings and is best defined as the art of making places for people. It includes factors such as community safety, and the way places work as well as how they look; it structures the patterns of movement and urban form, the relationships between the natural environment and the buildings within it, and above all it connects people with the places they inhabit. Urban design therefore involves the design of what is known as the "public realm" – the streets, squares, parking lots, town greens, parks, playgrounds and other open spaces shared by everybody in the community.

Baxter Village, SC

The process of urban design is intended to bring order, clarity and a pleasing harmony to the public realm of the City, and to establish frameworks and processes to facilitate successful development. It therefore adds "flesh to the bones" of the broad civic visions and policy statements contained in the 2020 Germantown Vision Plan by illustrating what the future might actually look like. As such, good urban design is indivisible from good planning.

Factors that affect urban design therefore include:

- The placement of buildings and the design of their façades, particularly with regard to entrances and window patterns;
- The design of urban open space
- Hard and soft landscaping and related environmental considerations
- The placement and layout of car parking
- Street patterns and street designs for safe and attractive pedestrian movement, efficient vehicle circulation and public transit
- The design of "street furniture," such as transit shelters, outdoor lighting, signs and signage, and public seating
- Public art
- Amenities for pedestrians and bicyclists

With all these variables, some basic principles and standards can help to create successful and memorable places at a variety of scales from public squares at the heart of a new town center to smaller public greens in surrounding neighborhoods. The principles in this section should be used as general development guidelines for new development in the Smart Growth Plan area.

Building Placement and Façade Design

A primary task of all buildings in urban settings is to define the public spaces of streets and squares as attractive locations that can be safely shared with all citizens. Streets lined with buildings rather than parking lots are more interesting to move along and provide a safer environment for pedestrians through the informal observation of public space through windows and doors by people living or working in the buildings. Accordingly, all buildings in the central area should be placed close to the street or other public spaces, with their entrances facing onto public space. The placement of buildings should screen the majority of on-site parking, loading and garbage areas from public view. Accordingly, these areas generally are located to the rear of buildings.

City Place, FL

Architecture and landscape design should grow from local climate, history, topography and building practice. Individual architectural projects should be responsive to their surroundings, and each building should be designed to form part of a larger composition within its contextual location.

The Town Green in Davidson, NC

Main Street, Beaufort, SC

Building facades should be varied and articulated to provide visual interest to pedestrians. Street level windows and numerous building entries from the sidewalk should be required in all new developments in the downtown area. Vertical proportions for doors and windows are always preferred over horizontal. Long runs of glazing should be broken up into repetitive, vertically-proportioned component parts. Creative signage, awnings and ornamentation are encouraged. No building wall that faces a street should remain unpierced by a window of functional doorway for more than 15 feet (fire exit doors don't count) as streets with monotonous and unarticulated facades are hostile to pedestrian activity. Storefront windows should be transparent. Mirrored glass, faux or display casements are strongly discouraged.

Building Placement and Façade Design (continued)

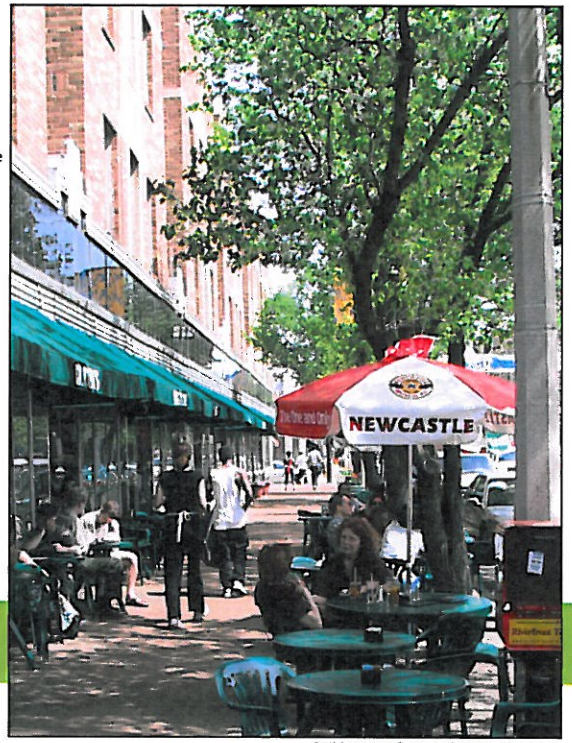
The principal, street-facing facades of commercial and mixed-use buildings should generally be designed using the three-part design concept of "base, middle and top". The "base" comprises the pedestrian zone of larger windows and doorways at street level; the "middle" consists of one or more repetitive stories of regular windows to offices or apartments (where vertical proportions are preferred over horizontal); and the "top" is created from a distinctive cornice treatment or devices such as a setback top floor with a strong overhanging roofline to create a deep shadow pattern for visual termination. Buildings with long elevations should be designed so that the facades are also articulated into a series of vertically proportioned rhythms; this adds visual interest to the streetscape when viewed from a pedestrian perspective.

Buildings at street corners should be designed to address the corner, that is, to engage the interest of drivers, pedestrians and bicyclists at the intersection. Building entrances, additional building mass and distinctive architectural treatments are all useful elements in adding significance to corner buildings.

Buildings should always frame and reinforce pedestrian circulation, so that people walk along building fronts rather than across parking lots or driveways. Buildings can usefully be arranged to create view corridors between pedestrian destinations, such as main entrances, transit stops, public amenities and urban open spaces.

Source: Raleigh, NC UDG


Vertically proportioned rhythm



Buildings reinforce pedestrian circulation


Corner Building, Huntersville, NC


Corner Building, Huntersville, NC

Urban Space Design

The design and location of urban open space in the redeveloped town center area is one of the most important determinants of a successful pedestrian environment. Examples of useable urban open space include:

- outdoor café or restaurant seating
- an urban square with seating
- a town green
- a wide arcade for strolling along store fronts
- urban parks and picnic areas

The type and character of urban open space should be influenced by the surrounding uses (e.g. retail, office, or residential) as well as by prospective user groups (e.g. workers, shoppers, young people, the elderly).

To ensure than urban open space is well used, it is essential to locate and design it carefully with users in mind, rather than simply considering aesthetics. The space should be located where it is visible and easily accessible from public areas such as building entrances and sidewalks. Views, shelter from winds and exposure to sun should all be taken into consideration. Trees provide useful and pleasant shade for pedestrians; a general rule of thumb suggests that 1 tree be planted for every 500 square feet of urban open space.

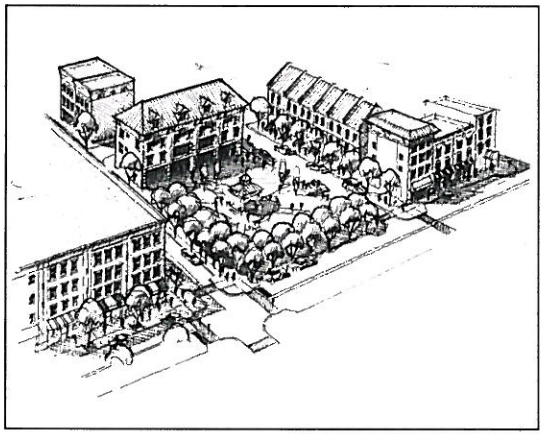
New urban open spaces should contain direct access from the adjacent streets; they should be open along the adjoining sidewalks and allow for multiple points of entry. They should also be "visually permeable" from the sidewalk, allowing passers-by and police officers to see into the space.

The space should be well buffered from moving vehicles so that users can relax and enjoy the space. The space may be visible from the street or internal drives, but not wholly exposed to them. It should be enclosed and defined by building walls and landscaping to create a comfortable "outdoor room."

The edges of urban open spaces should consist of activities that provide pedestrian traffic and uses for the space, including retail, cafes and restaurants, and higher density residential. Mixing the uses in buildings that surround an urban open space such as a square or town green provides for different patterns of activity that overlap in time and maintain activity during the day and into the evening. If residences are located at street or plaza level in an urban situation, the ground floor must be raised a minimum of two feet; a porch or stoop should be provided to create a privacy zone and to distinguish residential front doors from commercial entrances.

Programming specific activities for the space will help make it a lively place. Urban open spaces can usefully incorporate public art to add visual interest, historical commemoration, whimsy and humor (See Public Art, below).

Many street corners are not good locations for urban open space. Plazas and other open space features at high-traffic street corners may be attractive to look at but are often not well used. Urban open spaces should always provide plenty of opportunities for people to sit and relax; a rule of thumb suggests providing 25 linear feet of seating for every 1,000 square feet of urban open space.



Active buildings surrounding public space

Trees surrounding park, New York City

Public park as an "outdoor room", New York City

Raised stoop creates privacy while still fronting the street, Davidson, NC

Landscaping & Environmental Protection

Successful urban spaces contain well-designed landscape elements, either "hard" landscaping in the form of brick paving or other durable materials used for ground surfaces and walls, or "soft" landscaping of grass areas, trees, water, and planted areas of various types. Soft landscaped areas also provide opportunities to create optimal environmental solutions for site drainage and habitat protection.

The retention of existing landscape features is always preferable wherever possible. In urban areas, the disciplined geometrical arrangement of trees and other landscaped elements is always preferred over the typical "informal" aesthetic of suburban configurations. Particularly in residential areas, repetitive street trees can help define the public space of the street, provide shade for pedestrians, and create a screen that separates the public realm of the street from the semi-private realm of the front gardens, porches and stoops.

Site design should always locate trash storage, loading and truck parking in ways that minimize their visibility from streets, sidewalks and building entrances. Service and loading areas should never be located along important view corridors. Since delivery and trash trucks can be noisy, service areas should also not be placed close to residential units, hotel rooms or usable public open space.

All utility equipment should be located and sized to be as inconspicuous as possible. In new development and in redevelopment sites wherever possible, all utilities, new and existing should be placed in underground conduits or vaults. HVAC equipment, utility meters and service equipment should not be sited on the street side of any building or next to public open spaces such as squares, parks or playgrounds. This visual clutter severely compromises the design of the public spaces all citizens share.

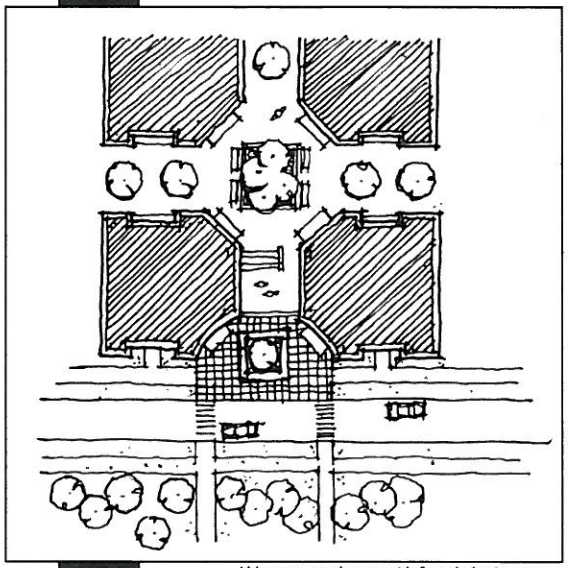
Hidden utilities, Atlanta, GA

All development should respect natural resources as an essential component of the human environment. Existing vegetation and large specimen trees should be preserved wherever possible and incorporated into the site design in order to enhance the sense of place. Where existing landscape needs to be cleared for development, extensive replacement tree planting and landscape elements should be provided, especially to create a future tree canopy and to reduce the "heat island" effect of unshaded and uninterrupted areas of asphalt and concrete.

Preservation of large specimen tree within new development, South End, Charlotte

Tree-lined residential street, Celebration, Florida

Preserved creek incorporated into public space



Urban courtyard space with formal planting pattern

Parking Placement & Layout

Parking lots should not dominate the frontage of pedestrian-oriented streets, interrupt pedestrian routes or negatively affect adjacent developments. Car parking areas should thus be placed behind buildings or in the interior of an urban block whenever possible. Parking, loading or service areas should never be located at a street intersection. When parking lots unavoidably come to the street edge, their dimension along the street should not be more than 1/3rd of the frontage of the adjacent building, or no more than 64 feet, whichever is less. Such parking lot frontages along streets should be screened by walls or landscaping.

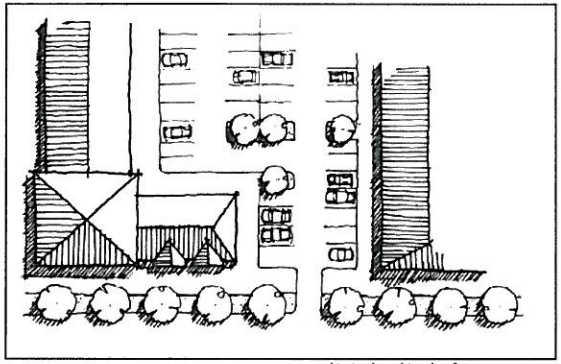
For large "overflow" areas or peak season parking, pervious pavement systems should be used. Surface parking lots should connect to each other via alleys or driveways, or with recorded, cross-access easements. This continues the practice in Germantown of convenient local movements within adjoining sites without having to drive on public streets for short distances. This internal circulation functions as an integral part of the overall transportation network.

The grades of abutting properties should be matches wherever possible to facilitate connectivity between parking lots. If there is a grade difference, an attractive transition should be made using creative grading and landscaping, or a decorative retaining wall. Blank or unscreened concrete retaining walls, or rock covered slopes should not be permitted.

Safe pedestrian and bicycle links should be provided to adjacent properties (in addition to the public sidewalks). They should be conveniently located and graded without using steps if at all possible. Curb ramps should be provided to accommodate wheelchairs, bicycles and baby strollers. If no immediate benefit can be derived from a pedestrian link, an easement for a future connection should be obtained.

Shared parking is strongly encouraged between adjacent or vertically mixed uses whose peak demands are offset from each other during daytime and evenings. Parking aisles should be separated one from another by planted medians with shade trees. When possible, it is recommended that parking aisles and their shade trees be aligned so as to cast shade on parked cars during the summer months.

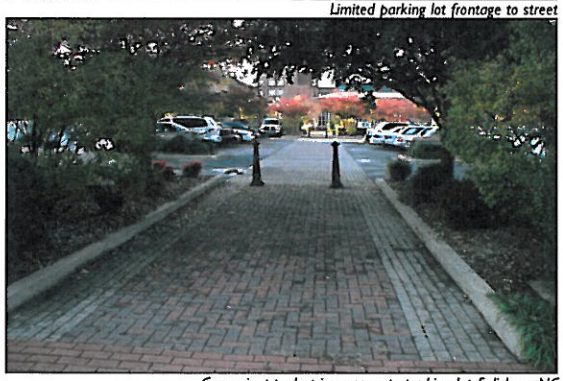
In several instances, parking structures are important and necessary elements in the overall urban infrastructure, but given their utilitarian elements they can have serious negative visual effects. Wherever possible these decks should be screened by buildings, and in locations where a portion of a deck faces onto public space, this part of the deck should be finished with materials equivalent to those of principle buildings.



Limited parking lot frontage to street

Source: GrassCrete.com

Grass paver system installed for overflow parking at mall



Convenient pedestrian access to parking lot, Salisbury, NC

Screened parking, Savannah, GA

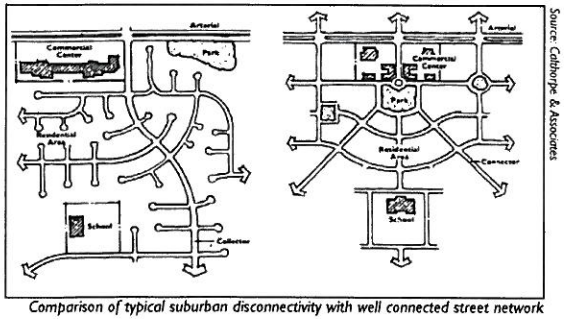
Hidden parking deck, Birkdale, Huntersville, NC

Street Patterns & Design
(see also section on Transportation Infrastructure)

The connectivity of public streets is very important for safe and attractive pedestrian movement, and efficient circulation for private vehicles, bicycles and public transit. Streets should be designed as the main public spaces of the City, and should be scaled for pedestrian comfort and accessibility.

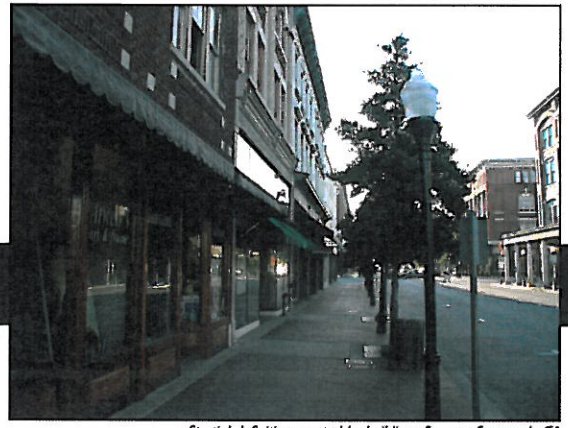
Pedestrian-scaled urban environment, Athens, GA

A network of interconnecting streets disperses traffic while connecting and integrating new developments with the fabric of the City. Accordingly, streets should connect within each development and with adjoining developments. Cul-de-sacs or dead-end streets should not be permitted except where topographic or particular site boundary conditions prohibit connections. In all other conditions street stubs should be provided on all sides of a development facing open land or future redevelopment sites.



Source: Calthorpe & Associates

Comparison of typical suburban disconnectivity with well connected street network



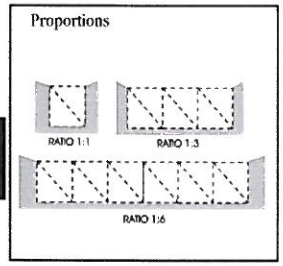
Spatial definition created by buildings & trees, Savannah, GA

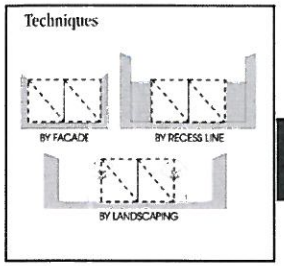
Block lengths should generally not exceed 600 feet. Wherever appropriate, mid-block and rear alleys should be utilized for access to parking, utilities, service and loading areas. This minimizes the number of driveways and curb cuts that interrupt pedestrian sidewalks. The sidewalks themselves should be 5 – 8 feet wide and located on both sides of the street. Sidewalks in commercial areas should be a minimum of 12 –16 feet wide to accommodate sidewalk uses such as vendors, merchandising and outdoor seating.

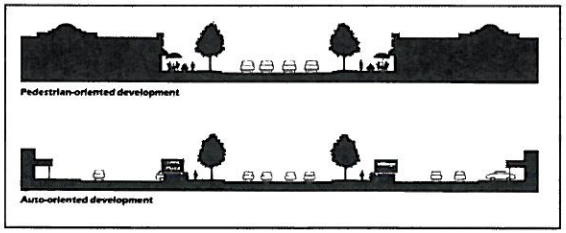
Streets are spatially defined by buildings, often complemented by regular tree planting. When aligned in a disciplined manner, buildings and trees create the street "walls," the defining edges to public space. This alignment occurs most effectively when the facades of buildings cooperate to delineate the public space as walls form a room. Building articulation should take place primarily in the vertical plane of the façade, where porches, balconies and bay windows are all elements that can add more visual interest to buildings than "zig-zagging" the plan shape.

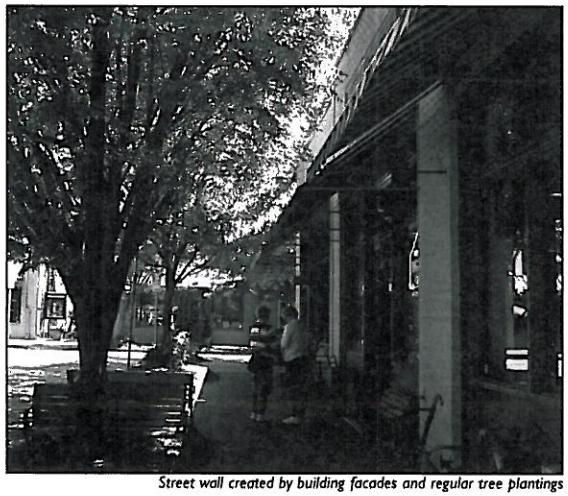
A critical factor in street design is the "height-to-width" ratio, that is, the height of the enclosing buildings (and/or trees) to the width of the street. This height-to-width ratio generates the feeling of openness or enclosure, the perception of which is related to the physiology of the human eye. If the width of a public space is such that the cone of vision encompasses more sky and less street walls, the degree of spatial enclosure is slight. If the street walls become more dominant within the cone of vision, the feeling of spatial enclosure increases. Such spatial enclosure is particularly important in shopping streets which must compete with shopping malls that provide very effective, human-scaled spatial definition to their main public spaces.

A 1:6 height-to-width ratio is the minimum for effective urban spatial definition. A more appropriate average ratio is 1:3. As a general rule, the tighter the ratio, the stronger is the sense of place and memorability.









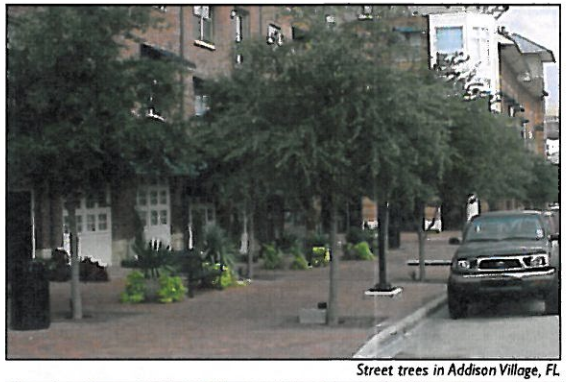
Street wall created by building facades and regular tree plantings

Street Patterns & Design (continued)

Streets should be designed with street trees planted in regular rows, and in a manner appropriate to their function. Commercial streets should have trees which compliment the faces of the buildings and which shade the sidewalk. In the urban core of the redeveloped "superblock," trees may be planted in tree wells with grates to protect the roots. In these settings, irrigation should be provided, and unit pavers are preferred to concrete as the sidewalk finish for increased permeability of rainwater to root systems. Trees on residential streets should provide a canopy that shades both the street and the sidewalk, and serves as a visual buffer between the street and the home. The tree planting strip should be at least 6 – 8 feet wide to ensure healthy growth.

Planted medians are encouraged on multi-lane streets to provide additional tree canopy and to reduce the height–to–width ratio of the overall streetscape. The medians also provide safe and convenient pedestrian refuges at crossings.

On-street angled & parallel parking



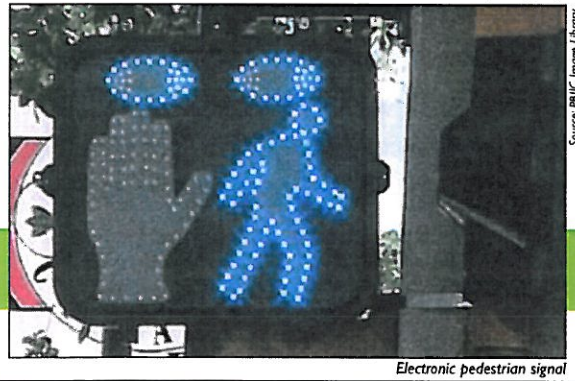
Street trees in Addison Village, FL

On-street parking should be provided wherever possible, either parallel or "reverse-in" angled parking on designated streets for maximum efficiency. Where streets incorporate a landscaped planting strip (as opposed to tree grates) this strip should be planted with grass at sidewalk level. This enables people to step directly from their car to the sidewalk. Shrubs, ground cover plantings and raised planters should generally be avoided in these situations as they can conflict with opening car doors and pedestrians' access to and from on-street parking.

Streets should be designed so pedestrians have safe and convenient means of crossing from one side to the other. Treatments may include (but are not limited to) raised pedestrian crosswalks, multi-way stops, sidewalk "bulb-outs," alternative pavement surfaces, and pedestrian-operated signals where warranted.

Residential street with tree planting strip

Pedestrian crosswalk, Mayfaire Town Center, Wilmington, NC



Source: PBIC Image Library

Electronic pedestrian signal

Source: PBIC Image Library

Landscaped pedestrian refuge & "bulb-out"

The Design of "Street Furniture"

The term "street furniture" includes things such as transit shelters, nighttime lighting fixtures, signs and signage, and public seating. These items not only serve the needs of pedestrians and drivers, but also provide opportunities to enhance the visual quality of public spaces with attractive designs of these functional objects.

Transit Shelters: When mixtures of uses, building densities and connected street patterns are coordinated to produce an attractive and lively town center, public transit can become a viable alternative to the private automobile for local trips. Transit stops or bus shelters should therefore be a basic element in the urban design of the town center redevelopment, and should be functionally and architecturally integrated with the streetscape design.

Source: PBIC Image Library

Covered bus stop along multi-use path

In general, far-side bus stops (stops located immediately after a street intersection) result in fewer traffic delays, provide better sight distances for drivers and pedestrians, allow more room for maneuvering, and create fewer conflicts between buses and pedestrians. The clearance between the curb and the shelter and/or benches should be no less than 3 feet and no more than 10 feet.

Wherever practicable, bus stops should be located at or near building entrances and should be provided with basic amenities including shelter from inclement weather, seating, pedestrian-scaled lighting, trash receptacles, schedule information and (possibly) water fountains. Convenient and comfortable pedestrian access between transit stops and entrances of major buildings should be planned as part of the overall pedestrian network. Bus stops should also include a curb-side concrete pad for wheelchair loading. Colors, textures and materials used around the stop should be compatible with adjacent development.

Nighttime Lighting: Generally speaking, the urban landscape is illuminated at night by three different types of lighting: street lighting, pedestrian/sidewalk lighting, and storefront lighting. The first two effectively provide sufficient light for most needs, but due to spacing and obstructions such as street trees and signage, even well-placed street and pedestrian lighting can leave some areas in shadow. These dark areas can be attractively and safely illuminated by the third type of urban lighting, indirect light from storefront displays and shopfront windows. By requiring simple lighting in display windows, the City can provide a greater measure of security to pedestrians by ensuring an even allocation of light on the sidewalk area.

As one element of the three-zone scheme for nighttime lighting, decorative lighting provides a safe and visible pedestrian realm as well as assisting in the creation of a theme or character for an urban district. The use of decorative light fixtures along with a coordinated program of signs and banners can help create a lively pedestrian environment. This decorative lighting should illuminate sidewalks and pathways using low intensity fixtures that avoid light pollution and which provide an even distribution of light. All lighting schemes must avoid creating areas of intense shadow.

Signage: Signage in a downtown area falls generally under three categories, storefront signs, special event or themed banners and wayfinding signs.

Storefront Signage: In eclectic, urban districts such as downtowns, pedestrian activity is expected to be high, and the way pedestrians view and experience signage is very different from motorists in a suburban shopping center. Therefore, it is not appropriate to retain suburban-style signage standards for storefronts in new town center areas. Present code requirements in Germantown dictate certain sign types specific to suburban settings, but as the City develops a more urban form, it should require different standards, particularly the use of projecting and three-dimensional signs in the downtown areas. In addition to advertising benefits, these features add ornamentation and detail to what might otherwise be rather plan

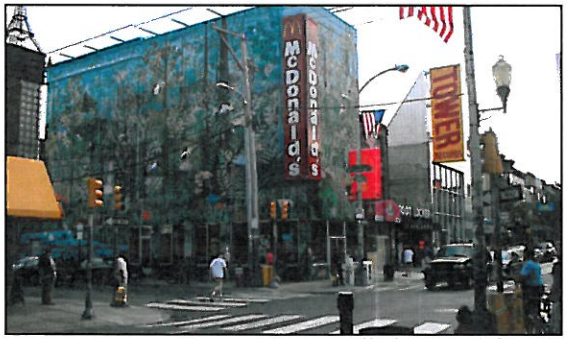
Street lighting

Facade signage, Statesville, NC

storefronts.

Storefront signage must be clean and concise. Signage on the glass should maintain the transparency of the window so as not to obscure viewing into the store. Store hours should be clear and regular. All signs in the windows should be professionally prepared. Merchants should avoid hand-made signs that look cheap and unattractive as they will give the potential buyer the impression that the contents inside the store are equally unappealing.

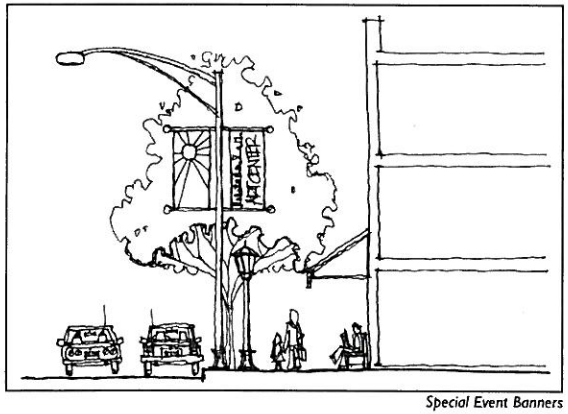
In addition to wall signs and under-canopy signs for nearly every storefront, the City should encourage painted signs or murals on end or side walls of buildings that abut streets but lack store frontage on the side. Historically, manufacturers such as Coca-Cola or Ford used such designs to advertise their products. Though replaced by billboards when the age of the automobile overtook downtowns, many communities (including suburban municipalities) have re-created these murals as nostalgic representations of earlier eras. In fact, new suburban locations such as SouthPoint Mall in Durham, NC, implement the murals as a way to break up large blank walls, turning a "dead" space into a colorful corridor.



Mural creates a colorful corridor

Lastly, the City should examine a facade improvement grant program for existing businesses to spur investment in new and interesting types of signage. Incentives could be extended to storefront improvements as well. For new developments, Germantown codes should advocate certain quality standards (such as three-dimensional signage) while leaving the actual form open to creative inspiration. (insert photos of good storefront signs and murals)

- *Special Event Banners.* This special category of sign, usually attached to decorative light poles, can often add distinctive flashes of color and visual interest to a town street. They are best used to draw attention to special events and should thus be temporary, and changed out after the event is over. When an urban area is struggling to create a distinctive brand or character, banners can help in communicating the vision for the area. However, the best communicators of urban character are the spaces and buildings of the downtown themselves, and the patterns of activity they house. The most successful urban areas rarely need banners to tell residents and visitors about the place's character; it is all around them, easy to see and experience. The City should thus encourage special event banners in the redeveloping downtown, but also look forward to the day when such branding activities are unnecessary as the vision of the plan takes physical shape and a thriving, attractive town center has developed.



Special Event Banners

- *Wayfinding Signage.* The design of the overall streetscape in the town center area should include a system of pedestrian wayfinding signs, kiosks, or other environmental graphics to supply directions to pedestrians. This should be done in a unified and comprehensive manner throughout the town center study area. The design of this signage system should be keyed to the new marketing and branding philosophy for the study area.

Informal public seating, Morgan Square, Spartanburg, SC

Public Seating: Attractive and accessible places to sit in the public realm are important not only as basic amenities, but also in sponsoring casual social interaction, one of the foundations of community. New public spaces in the City should thus provide as many new seating opportunities as possible. (insert DW photo of man with laptop) This seating can be both formal and informal, including park benches, the tops of garden walls, user-friendly public art, or wide stairs at the entrances to public buildings. Planter walls should be set at a maximum height of 2' 6" to allow for their use as seating. Moveable chairs that give people the flexibility to adapt public spaces to their immediate needs are encouraged, particularly at sidewalk cafes and outdoor dining areas.

Wi-Fi Network

The emerging popularity of "wi-fi" networks in public spaces around the country is rapidly catching on, especially in downtown areas. Using wireless access point technology, the intent is to allow laptop users with a wireless network card to be able to relax on a bench in a public area (such as the Municipal Park) or eat at an outdoor table at a restaurant and be able to "surf the web" and check email.

Wi-Fi network in public space, New Hampshire

Wayfinding signage, Legacy Village, Kansas City

The costs to implement such a service continue to decline with new technology that can provide faster speeds, higher bandwidth, and a wider range to the casual users. As funds become available, this technology should be implemented throughout the Municipal Block, Superblock, and other areas deemed appropriate (such as Town Center West, Old Germantown, etc.).

Cities like Philadelphia, PA and Spokane, WA have created a "hot zone" in their downtowns using towers that can provide signals as far away as 4 miles. According to Kathleen McMahon, AICP (Downtowns are Buzzing About Wi-Fi - http://cbdd.typepad.com/rural/2005/01/dowtowns_are_bu.HTML accessed on 02.28.07) there are four basic implementation strategies for Wi-Fi technologies in downtowns. They are:

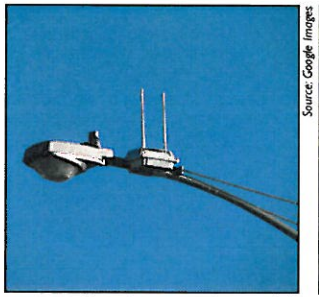
- Wi-Fi (Wireless Fidelity) - "A public Hotspot is a readily available wireless network connection where users with compatible wireless network devices such as PDAs, cell phones, notebook computers, or handheld games can connect to the Internet or private intranet, send and receive email, and download files all without being encumbered by Ethernet cables." (Intel-Wireless Hotspot Deployment Guide)
- Hot Spot – The wireless router is located in a building. The range is limited primarily to the building (i.e Internet Café's ....) The cost to install is relatively low. Starbucks is a well known example.
- Hot Zone – A tower provides coverage from 1 to 4 miles. Line of site is required. The cost to install depends on the coverage area. Spokane and Philadelphia use this technology.
- Mesh Networks – Provides wide coverage with multiple towers and antennas. Minimizes line of site requirements. Of the wi-fi technology options this is generally most expensive. Medford, OR is using this for City-wide coverage. Columbia Rural Electric Association has covered three rural counties in eastern Washington with this technology.

All of these types of deployment use unlicensed wireless spectrum (802.11b or 802.11g). It is essentially the same technology that is used in home wireless networks. Speeds on the wireless network can approach 11 Mbps but will depend on the number of users and the capacity of the broadband pipe that connects the wi-fi network to the Internet Service Provider (ISP).

Ultimately, the purpose behind providing this technology infrastructure is to attract people to the downtown area. Younger generations have grown up with wireless devices and have come to expect readily available high speed internet access. If the downtown presents an inviting on ramp to World Wide Web, then people will spend time and money in the downtown.

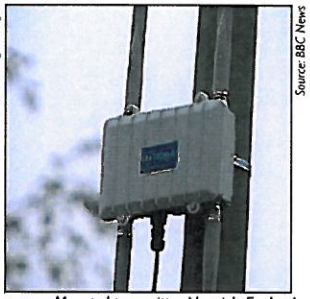
The cost to provide this service is nominal relative to the potential number of users in the downtown area. To further expand this opportunity, the City should consider partnering with the Library and possibly major employers/retail centers in the study area.

The City should also investigate the creation of a custom login screen for all WiFi users. This screen is an opportunity to provide some advertising space to offset the costs of providing the service for free as well as an outlet for advertising upcoming events in Germantown.



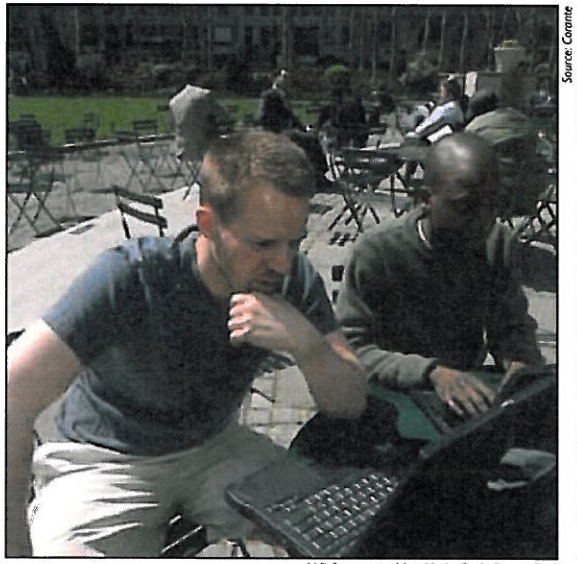
Source: Google Images

Transmitter mounted on streetlight



Source: BBC News

Mounted transmitter, Norwich, England



Wi-fi users in New York City's Bryan Park

Source: Corante

Source: SF Chronicle

Public wi-fi space, San Francisco, CA

Public Art

Works of art have contributed to the visual quality of cities throughout history, whether as elements of architectural ornament or civic monuments. Property owners should therefore be encouraged to provide outdoor public art on their property, or adjacent to public spaces, in order to enrich the pedestrian experience and create a stronger sense of place.

The level of detail adorning the public realm is one factor that can differentiate a truly public urban environment from a typical shopping center. Many communities have incorporated humorous and educational artwork into their public spaces to create a more vibrant downtown atmosphere. Such artwork may be freestanding pieces (e.g. a sculpture or water fountain), or it may be embedded into its surroundings as an architectural element (for example, a relief sculpture embedded in a pavement or a wall, a mosaic or mural on a wall, lighting or sound effects, or decorative lighting or railings).

For example, a high school student in Greenville, SC, created "Mice on Main", a series of well-placed (and sometimes hidden) sculptures of mice based on the popular children's book "Goodnight Moon." A bronze sculpture of the book and one mouse are located on the fountain in front of the Hyatt Regency hotel. The City installed the other eight mice throughout the downtown and finding them has become a game that entertains children and adults alike.

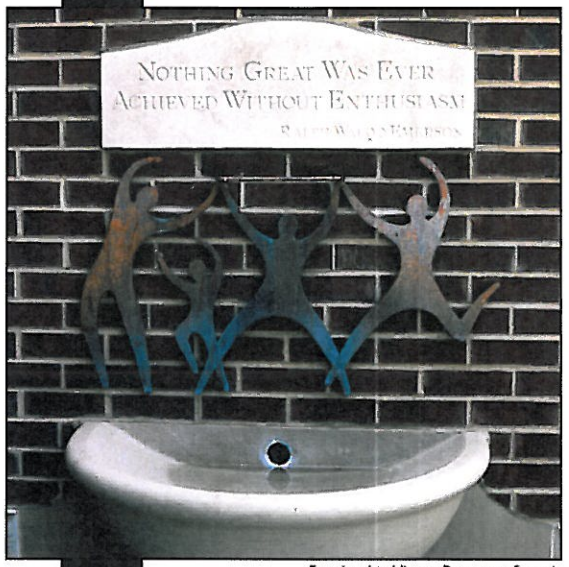
Bronze Mice, Greenville, SC

Likewise, Germantown's Vision 2020 Plan proposes "visual public art throughout the City." Given its strong support of the arts, Germantown might consider initiating an "Adopt-A-Square" Program with the local arts community and area schools for the creative placement of civic art within the sidewalks throughout the City. Relevant images might range from Civil War troops to trains to horses or other, more adventurous interpretations of the City's past, present and future. Relatively inexpensive and easily expanded, this type of artwork adds interesting features for pedestrians. Focus areas for such a program include Old Germantown, the proposed new Main Street corridor, the Municipal Block, and other activity centers.

Germantown should also encourage the placement of free-standing statuary and other multi-dimensional art forms. Art encourages activity in public spaces, enlivening the atmosphere and creating places with a child-friendly focus. Specifically, the City should reserve locations for public art around all public buildings and facilities, such as the proposed Town Green and elsewhere on the Municipal Block.

All new urban spaces and infrastructure improvements should have a significant component of public art that adds distinctive quality and specialness to the development and to the City as a whole. Developers of new projects are accordingly strongly encouraged to incorporate artists into the design team from the inception of planning in order to integrate works of art into each project.

Interactive statuary and water feature



Functional public art: Dog water fountain

The Writer's Desk, Charlotte, NC

Amenities for Pedestrians and Bicyclists

There should be a complete network of sidewalks and paths for pedestrians and cyclists that connect building entrances, parking areas, transit stops, street crossings, adjacent properties and adjoining off-street paths, and other key destinations in the area.

Pedestrian pathways should be provided from the street to mid-block parking areas to ensure safe, direct and convenient access to off-street parking. Main building entrances should be directly accessible from the street and subsidiary entrances from pedestrian pathways. The pathways should be clearly defined and pleasant to use. To aid pedestrian navigation and comfort, the following elements should be provided along the paths:

- Landscaping, such as rows of trees, shrubs, flower beds and planters
- Pedestrian-scaled lighting, such as lighted bollards
- Color-coded way-finding signs or a directory
- Vertical architectural elements, such as arches or place markers
- Public art
- Seating and resting spots
- Special paving

Bike racks should be provided (under cover if possible) near main building entrances, with a curb ramp from an adjacent street or driveway to provide convenient access. 1 bike parking space should be provided for every 20 car parking spaces.

Pedestrian routes should be direct and minimize conflicts with vehicles. No paved pedestrian path should be less than 5 feet wide. Multi-use paths (bicyclists and pedestrians) should not be less than 8 feet wide, although 10 feet is preferred.

Whenever any parking abuts a walkway (diagonal or parallel) 1' 6" should be added to the pathway width to accommodate car body overhang or opening car doors.

Whenever pathways cross internal drives and curb cuts, a highly visible crosswalk, made of a material that provides a strong contrast with the vehicular surface (e.g. concrete in asphalt, unit pavers in concrete) should be incorporated into the site design. Crosswalk stripes are acceptable but require frequent repainting and do not look as attractive. Consider raising the crosswalk to the level of the connecting path to form a speed table, and use standard warning signs and lighting to alert drivers to the crossings.

Source: Michael Rankin

Well marked pedestrian crosswalk

Place bicycle racks near building entrances

Bike lanes with on-street parking

Key Recommendations for Urban Design

- *All buildings in the central area should be placed close to the street or other public spaces, with their entrances facing onto public space. Buildings should screen the majority of on-site parking, loading and garbage areas from public view.*
- *Building facades should be varied and articulated to provide visual interest to pedestrians. Street level windows and numerous building entries from the sidewalk should be required in all new developments in the town center area.*
- *New urban open spaces should contain direct access from adjacent streets; they should be open along the adjoining sidewalks and allow for multiple points of entry.*
- *Urban open spaces should be defined by building walls and landscaping to create comfortable "outdoor rooms," with public art and as many new seating opportunities as possible.*
- *The edges of urban open spaces should consist of activities that provide pedestrian traffic and uses for the space, including retail, cafes and restaurants, and higher density residential. Mixing the uses in buildings that surround an urban open space such as a square or town green provides for varied patterns of activity that overlap in time and maintain activity throughout the day and evening.*
- *Streets are the main public spaces of the City; they should be spatially defined by building facades and regular tree planting, and scaled for pedestrian comfort and accessibility.*
- *A 1:6 height to width ratio is the minimum for effective urban spatial definition. A more appropriate average ratio is 1:3. As a general rule, the tighter the ratio, the stronger is the sense of place.*
- *A network of interconnecting streets disperses traffic while connecting and integrating new developments with the fabric of the City. Accordingly, streets must connect within each development and connect with adjoining developments.*
- *On-street parking should be provided wherever possible, either parallel or "reverse-in" angled parking on designated streets for maximum efficiency.*
- *Sidewalks should be 5 – 8 feet wide and located on both sides of the street. Sidewalks in commercial areas should be a minimum of 12 – 16 feet wide to accommodate sidewalk uses such as vendors, merchandising and outdoor seating.*
- *There should be a complete network of sidewalks and paths for pedestrians and cyclists that connect building entrances, parking areas, transit stops, street crossings, adjacent properties and adjoining off-street paths, and other key destinations in the area.*

Sustainable design and development comprises two main areas of action: building design and site design. Parameters and guidance for sustainable building design are best set forth in the United States Green Building Council's (USGBC) LEED standards (Leadership in Energy and Environmental Design) (www.usgbc.org). The LEED design criteria deal also with site design for the areas around the building(s), and these sustainable landscape practices are further codified by the Low Impact Development (LID) standards, promulgated by, amongst others, the Low Impact Development Center (www.lowimpactdevelopment.org).

Sustainable Building Design

This conceptual master plan encourages the use of the LEED guidelines for certifying all new public buildings. Developed by the USGBC membership, the Leadership in Energy and Environmental Design (LEED) Green Building Rating System is a national consensus-based, market-driven building rating system designed to accelerate the development and implementation of green building practices. In short, it is a leading-edge system for designing, constructing and certifying sustainable buildings.

In furtherance of this goal, the City should encourage the use of "green" roofs such as a planted garden or "white" roofs (white painted surfaces to reflect sunlight rather than absorb it) for all new construction, particularly for public uses such as fire stations and schools. Such roofing systems not only reduce energy costs on the buildings, but green roofs can also be designed to capture and filter stormwater during a rainstorm. These techniques reduce the environmental footprint of a building and promote sustainable development practices.

Sustainable Site Design

Protection of Germantown's natural resources is a priority for the City and its citizens. While many parts of the study area are envisaged as remaining with little or no further development, much of the rest of the area is planned as a series of mixed-use urban developments, aggregating to a large civic, residential and commercial town center.

By their very nature, mixed-use centers are inherently urban. That is, the coverage of building footprints, parking areas, and hardscape are much higher than in suburban or rural areas. If the center of Germantown area is to thrive as a pedestrian-friendly, mixed-use area, it must have wide sidewalks, small lots, and buildings built close to the street and to each other. An important tool in managing stormwater quantity and water quality in this context is the use of Low Impact Development (LID) standards and techniques. In urban areas, these techniques will range from conventional underground retention structures, to localized bioretention areas such as rain gardens and planted swales as alternatives to large ponds, to permeable pavement surfaces (especially for parking areas), rain barrels and planted roofs.

The design of parking areas is particularly critical in terms of controlling the amount of surface water run-off from developments in the town center. Efforts to reduce parking lot acreage begin with minimizing required parking ratios, encouraging shared parking between uses, adopting and not exceeding nationally recognized minimum parking dimensions (The Dimensions of Parking, 4th ed. Urban Land Institute and the National Parking Association, 2001), grading parking lots to drain rainwater to multiple landscaped areas that can function as rain gardens to absorb and slowdown water run off, and the use of pervious pavement materials such as interlocking concrete pavers (e.g. Grasscrete).

The City should investigate implementation of Low Impact Development standards such as those adopted by the Town of Huntersville, North Carolina. According the Huntersville Ordinance, "the goal of LID is to develop site design techniques, strategies, and BMPs to store, infiltrate, evaporate, retain, and detain runoff on the site to more closely replicate pre-development runoff characteristics and to better mimic the natural and unique hydrology of the site thereby limiting the increase in pollutant loads caused by development."

L.E.E.D
Leadership in Energy & Environmental Design

The LEED (Leadership in Energy and Environmental Design) Green Building Rating System® was created to:

- *Define "green building" by establishing a common standard of measurement*
- *Promote integrated, whole-building design practices*
- *Recognize environmental leadership in the building industry*
- *Stimulate green competition*
- *Raise consumer awareness of green building benefits*
- *Transform the building market*

LEED provides a complete framework for assessing building performance and meeting sustainability goals. Based on well-founded scientific standards, LEED emphasizes state of the art strategies for sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. LEED recognizes achievements and promotes expertise in green building through a comprehensive system offering project certification, professional accreditation, training and practical resources.

LEED standards are currently available or under development for:

- *New commercial construction and major renovation projects (LEED-NC)*
- *Existing building operations (LEED-EB)*
- *Commercial interiors projects (LEED-CI)*
- *Core and shell projects (LEED-CS)*
- *Homes (LEED-H)*
- *Neighborhood Development (LEED-ND)*

Source: http://www.usgbc.org

Natural rain gardens to handle surface parking storm water

Encourage green roofs and green building design

What is Low Impact Development (LID)?

LID is an ecologically friendly approach to site development and storm water management that aims to mitigate development impacts to land, water, and air. The approach emphasizes the integration of site design and planning techniques that conserve natural systems and hydrologic functions on a site. The practice has been successfully integrated into many municipal development codes and storm water management ordinances throughout the United States. Specifically, LID aims to:

- Preserve Open Space and Minimize Land Disturbance
- Protect Natural Systems and Processes (drainage ways, vegetation, soils, sensitive areas)
- Re-examine the Use and Sizing of Traditional Site Infrastructure (lots, streets, curbs, gutters, sidewalks) and Customize Site Design to Each Site
- Incorporate Natural Site Elements (wetlands, stream corridors, mature forests) as Design Elements
- Decentralize and Micromanage Storm Water at its Source

LID Benefits

In addition to the practice just making good sense, low impact development techniques can offer many benefits to a variety of stakeholders:

For Municipalities
- Protect regional flora and fauna
- Balance growth needs with environmental protection
- Reduce municipal infrastructure and utility maintenance costs (streets, curbs, gutters, sidewalks, storm sewer)
- Increase collaborative public/private partnerships

For Developers
- Reduce land clearing and grading costs
- Potentially reduce infrastructure costs (streets, curbs, gutters, sidewalks)
- Reduce storm water management costs
- Potentially reduce impact fees and increases lot yields
- Increase lot and community marketability

For the Environment
- Preserve integrity of ecological and biological systems
- Protect site and regional water quality by reducing sediment, nutrient, and toxic loads to water bodies
- Reduce impacts to local terrestrial and aquatic plants and animals
- Preserve trees and natural vegetation

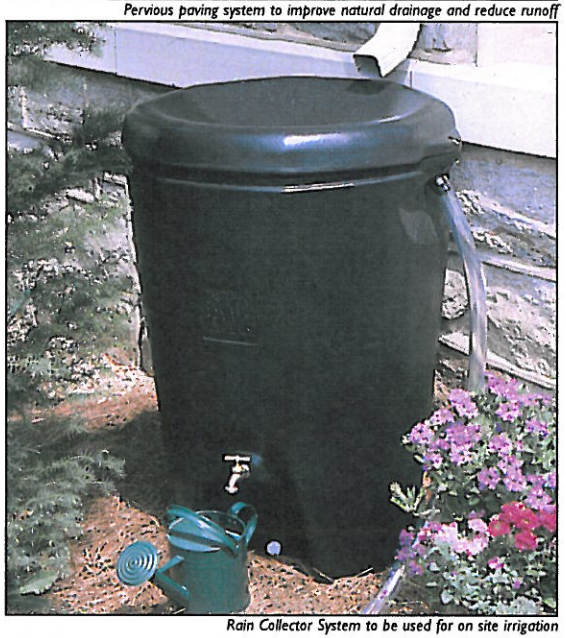
Hydrologic Comparison between Conventional Storm Water Management and LID

Hydrologic alterations within the landscape occur whenever land is developed. Conventional development approaches to storm water management have used practices to quickly and efficiently convey water away from developed areas. Usually these practices are designed to control the peak runoff rate for predetermined storm events, usually the 2- and 10-year storms. While these systems have worked to some degree, they still have not accounted for the increased runoff rates and volumes from smaller, more frequent storms, nor have they addressed the larger watershed functions of storage, filtration, and infiltration.

In contrast, LID utilizes a system of source controls and small-scale, decentralized treatment practices to help maintain a hydrologically functional landscape. The conservation of open space, the reduction of impervious surfaces, and the use of small-scale storm water controls, such as bioretention, are just a few of the LID practices that can help maintain predevelopment hydrological conditions.

Source: Municipal Guide to Low Impact Development, National Association of Home Builders

Pervious paving system to improve natural drainage and reduce runoff



Rain Collector System to be used for on site irrigation

Key Recommendations for Sustainable Design & Development

- *Consider implementing Low Impact Development (LID) Standards for the parking areas and landscape around all public buildings in the City. Development incentives should be provided to encourage private developers to incorporate similar landscape design concepts into commercial and residential developments.*
- *Encourage the application of LEED building standards for all new public buildings. Development incentives should be provided to encourage private developers to incorporate similar energy-saving design concepts into commercial and residential developments.*

Grass pavers used for fire lane at National Archives Building

Greenway system for pedestrians and bicyclists provides connections through region

From a market standpoint, Germantown maintains a particular identity and reputation within the Memphis region. As defined by the *2020 Vision*, Germantown desires to have "a business identity and brand" that will attract investment dollars as well as create a recognizable icon with which citizens and visitors may identify. During the charrette, many citizens stated that they wanted to see a new, updated logo that reflected Germantown's high quality of living. This plan recommends a revised strategy to address these concerns and others voiced by the City and its citizens.

Brand Advertising and Marketing

The City needs to market its resources to a broader audience. Marketing is about attitude and product. Germantown has the product—employment centers, high-quality housing, parks and cultural institutions such as the Germantown Performing Arts Center. Now it needs to be backed with the fresh, positive attitude and exuberance that was evident from many of the participants of the charrette. Once the "Germantown Brand" has been created and solidified, the City and its related agencies and organizations need to create a cohesive and unified marketing and communications plan that has two tiers - one that advertises to the community and the other that advertises to the larger region and the global marketplace.

Marketing to the community means elaborating on the City's existing efforts to reach out to the citizenry to impart a shared responsibility and common purpose, and create a sense of community. The City recently created "FYI", a newsletter focusing on Germantown's recreational, educational, and fitness services. In addition, the Playground and Senior Newsletters provide specific information for the City's youngest and oldest citizens. These media, including the expansive listings on the Germantown website, represent key avenues for the City's outreach efforts. As such, the City should continue to improve these services through consistent updating, expansion, and marketing efforts.

First - Build the Brand

The development of a brand and the marketing of that brand are central elements to the sale of any product. In business parlance, there is a distinct difference between "branding" and "marketing," and this relationship also defines the development and communication of a civic identity.

In short, a brand is a consumer relationship based on a set of core values that is defined by all the experiences, messages, promises, performance and qualities associated with it. Marketing on the other hand is the execution of a business process that generates awareness and demand for a product or service.

The development of a brand is a slow, methodical, multi-faceted process while marketing is a quick, often singular communication tool. Strong brands enhance the results of marketing programs, while marketing a product without a brand is selling the sizzle without the meat. The development of a branding strategy, therefore, is almost a necessary precursor to a successful marketing program.

In Germantown's case the "product" is the community itself – Old Germantown, the neighborhoods, the businesses, the churches, the cultural activities, the people, and everything else that comprises Germantown. What appears to be lacking however, is a clear and coherent branding strategy that ties all the elements together and gives the community a unifying message built on a set of core values and promises.

This plan therefore recommends the creation of a Branding Communications Plan consisting of the following components:

- Branding Strategy
- Brand Messaging
- Marketing Strategy
- Marketing Programs

The brand's identity must be unique and memorable and it should be sufficiently differentiated from its closest competitor. When considering the "Germantown Brand" the City should consider the brand as both an organization (City government) and as the entire community. The following elements, adapted from Successful Branding: Five Key Elements and One Mantra (http://www.gotomarketstrategies.com/tip_03_02.htm) should be included:

- *Brand Position:* The Brand Position is the part of the brand that describes what the City does and for whom, what its unique value is, how residents or businesses benefit from being part of the community, and what key differentiation this community has from others at both the regional and national level. Once the brand position has been created, it should be made available in 25, 50 and 100-word versions.

- *Brand Promise:* The Brand Promise is the single most important thing that the City promises to deliver to its customers - EVERY time. To come up with your brand promise, consider what customers (citizens), employees, and partners should expect from every interaction with the City. Every business decision should be weighed against this promise to be sure that:

  a) it fully reflects the promise; or
  b) at the very least it does not contradict the promise.

- *Brand Personality:* The City's "personality" is defined by "Brand Traits"; they illustrate what the City wants its brand to be known for. Germantown officials and residents should think about the specific personality traits they want other citizens, prospective investors, clients, employees, and partners to identify when they describe the City. The Brand Personality should comprise 4-6 traits (5 is ideal), each being a single term (usually an adjective).

- *Brand Story:* The Brand Story illustrates the City's history, explaining how this history adds value and credibility to the brand. It also usually includes a summary of the City's products or services.

- *Brand Associations:* Brand Associations are the specific physical artifacts that make up the brand. These comprise the City's name, its logo, colors, taglines, fonts, imagery, and so forth. The City's brand associations must reflect the municipality's brand promise, ALL of the brand traits, and support the brand positioning statement.

- *One Mantra:* Once the City has developed and defined a relevant brand, it must begin building the brand with citizens, employees, prospective investors, partners, etc. through CONSISTENT execution. Orchestrated repetition is essential to the success of the branding process.

- *Document the Brand:* Finally, to help ensure the City builds the habit of consistent brand execution across the whole range of municipal activities and services, the Brand Elements should be documented in a "Brand Book" and this guiding document should be provided to every employee for their own use in their daily activities. Elected officials and senior City staff should then become their City's "brand ambassadors" and begin the diplomatic process of self-enforcing its use!

Marketing and Branding Strategy and Action Plan

Year One

- Adopt a new updated logo for marketing and branding. This does not necessarily need to replace the formal Town Seal (but could). The true purpose is to have an image that is used on signage, marketing, and branding. We illustrate a logo that is contemporary without being too modern, related to nature, and is unique within the community and region.

- Implement Gateway Signs. We suggest signs that use the new logo, perhaps use a "casual" stone wall and split rail as a homage to the town's heritage. The contemporary logo juxtaposed against these traditional materials will create great interest.

- Create the Guide to Germantown. This is the City's shopping, dining, and activity brochure. The brochure should focus first on the historical aspects of the community and then profile the shopping and dining opportunities in the Downtown.

- Adopt a visitor-friendly Website. This should be launched in concert with the Guide Brochure and could integrated into the City's existing website.

Year Two

- Implement a Banner Program. The branding can be carried out very effectively in a festive banner program.

- Coordinate Programming with Parks and Recreation. Events, seminars, and activities related to the heritage of Germantown and activities geared toward seniors will be increasing important in continuing the branding and marketing of the community. The Parks and Recreation Department would create these events.

- Host a Familiarization Tour for Regional Press. By year two the "smart growth" focus of the community will be well underway. At this point, the regional press should be offered a chance to learn about Germantown's plan, the community's downtown focus, and the re-invention of the Study Area. The goal here is "free marketing" for the community's new brand.

Year Three through Five

- Convert the study area into a Business Improvement District. In year three or four, consider converting the Study Area into a Business Improvement District that utilizes a special tax assessment to fund a more comprehensive program of services for the area. The budget and staffing would come from the City of Germantown, with a starting budget of approximately $125,000.

- Implement Comprehensive Wayfinding System. Using the branding, a community wayfinding system should be implemented that will direct visitors to key amenities.

Logo/branding concept for Smart Growth District

Banner concepts for Smart Growth District

The development concepts in this plan are currently illegal under Germantown's existing zoning and subdivision regulations. In fact, the current standards are completely antithetical to the urban design principles of this plan and the City's vision of a "mixed-use," "pedestrian-friendly," central district that would "create sense of place for the community" as articulated in the *Germantown Vision 2020* document. While the existing zoning and subdivision standards may well have fulfilled the vision of the community at the time they were conceived; and, while they have successfully protected the City's residential neighborhoods from commercial encroachment, they are, like the buildings that have resulted from them, completely ripe for redevelopment. The current codes allow for and, in fact, require the type of development that characterizes the plan area today: single-use, automobile-oriented, low-density commercial development that, with the exception of the mature trees and the well maintained grounds, could be suburban Anywhere, U.S.A.

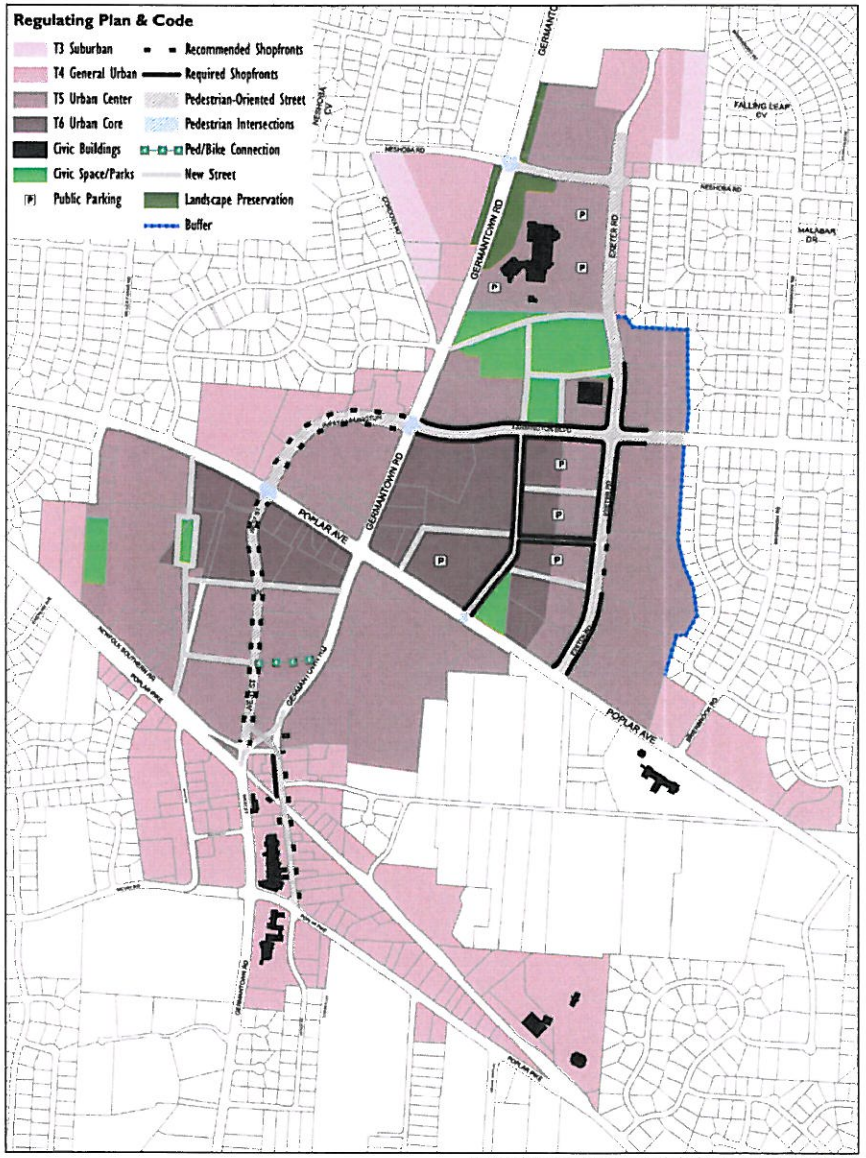
The existing regulations generally require that buildings be low-scale, with deep setbacks from the streets and other buildings, and over abundant motor vehicle parking. They specifically *prohibit* residential development in the commercial zoning districts that comprise the majority of the plan area. In the plan area zoning districts where residential is allowed, it is permitted at densities that would not support a walkable, mixed-use district. (The current maximum residential density allowed in any residential zoning district in the study area is six dwelling units to the acre in the R-T district. Townhouses can be built at 12-18 units an acre. More intensive urban residential densities go up from there. The current residential density for the study area is approximately 0.5 dwelling units per acre.) While the codes provide effective and detailed design regulations for signage and site landscaping and buffering, they provide no guidance at all on the design of buildings. Finally, the codes require generous streets and other infrastructure for moving and parking motor vehicles, but very little in the way of standards for infrastructure that would make walking or cycling appealing or comfortable.

"The SmartCode is a model integrated development code that incorporates Smart Growth and New Urbanism principles, Transect-based planning, environmental and zoning regulations, and regional, community, and building-scaled design provisions."

One of the fundamental recommendations and assumptions of this plan is that the existing standards must be changed to allow the type of development that the community envisions for the plan area. The first step in this process is to draw detailed concepts of the form of building, street design, and site design that reflect the community vision. This plan accomplishes this task. The next step is to develop regulating standards require such development as the norm for all new development in the study area.

As a companion document to this plan, City staff and the consultant team have developed a draft set of development regulations called the *"SmartCode for the Germantown Smart Growth Plan."* The standards are specifically adapted and tailored for Germantown based on model regulations of the SmartCode created by Duany Plater-Zyberk & Co., "a model integrated development code that incorporates Smart Growth and New Urbanism principles, Transect-based planning, environmental and zoning regulations, and regional, community, and building-scaled design provisions" (Smart Code, Version 8.0, available from PlaceMakers.com). The code is intended to replace the zoning and subdivision regulations currently in place in the plan area. The code may also be considered for application in other commercial and mixed-use nodes in the City.

This plan recommends that consideration and adoption of the SmartCode be one of the first (and most critical) tasks that the City undertakes towards implementation of the Smart Growth Plan.



Proposed Regulating Plan and Code for the Smart Growth Plan

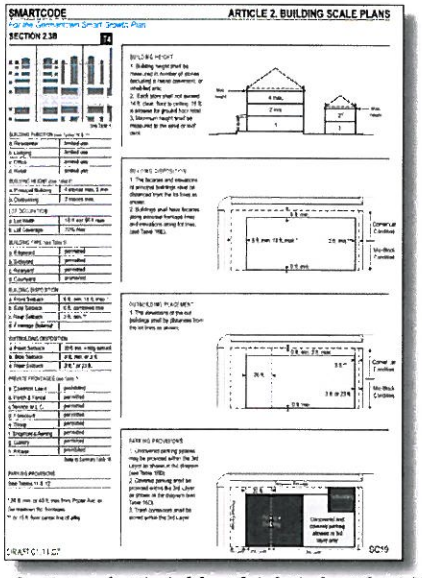
The Smart Code

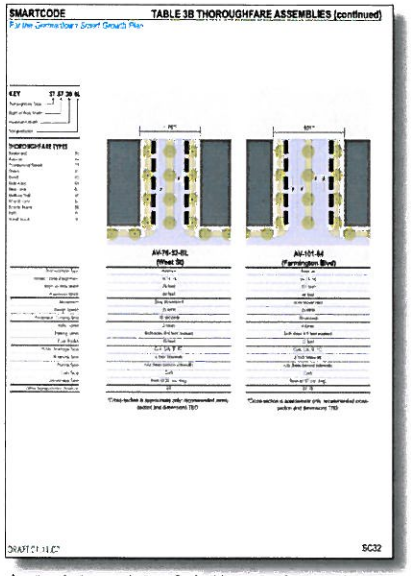
The SmartCode is based on the Rural-Urban Transect concept of context-based land development. The Transect is a method of, first, classifying the natural and built environments as a continuum of six conditions, ranging from the most natural to the most urbanized; and, second, detailing the specific development and design details for each condition. The graphic above the table at right shows the generalized features the Transect, with intensities of development and formal arrangement of buildings and streets increasing as Transect zones become more urban.

Each Transect category has detailed provisions for density, building height, street design, the design of parks, the mix of uses, building design, parking, and other aspects of the human environment. These categories define the type, intensity, and design of development for each specific Transect zone.

Based on existing and proposed development, the plan area was classified into four Transect zones (shown on the Regulating Plan on the previous page): T-3 Suburban for areas that area to remain low-density residential in nature; T-4 General Urban for areas that are to be developed with office, moderate density residential, and limited retail; T-5 Urban Center for areas that are appropriate for a wide range of uses from high density residential to retail and office; and, T-6 Urban Core, for the areas of the plan that are to be the most densely developed. The T-6 zone is proposed at the center of the study area, closest to the Germantown Road/Poplar Avenue intersection. The other zones radiate out from this point in decreasing density. A summary of proposed development standards for each zone is show in the table at right.

The Regulating Plan on the previous page also indicates recommended locations of public open space, ground-level retail, public parking, new streets, and other plan provisions that would be required as the new development occurs.





Sample pages from the draft SmartCode for the Smart Growth Plan showing design regulations for buildings, site design and streets.

Proposed Summary Standards for the SmartCode for the Smart Growth Plan Area

	T1 NATURAL ZONE	T2 RURAL ZONE	T3 SUB-URBAN ZONE	T4 GENERAL URBAN ZONE	T5 URBAN CENTER ZONE	T6 URBAN CORE ZONE	SD SPECIAL DISTRICTS
C. BLOCK SIZE							
Block Perimeter			3000 ft. max	2400 ft. max	2000 ft. max	2000 ft. max *	
D. PUBLIC FRONTAGES (see Tables 3 and 4)						* 3000 ft. max with parking structures	
HW & RR				prohibited			
BV			permitted				
SR			permitted		prohibited		
RS			permitted		prohibited		
BS & AV					permitted		
CS & AV					permitted		
Rear Lane					prohibited		
Rear Alley			permitted	required			
Path					prohibited		
Passage			permitted				
Bicycle Trail				prohibited *			
Bicycle Lane							
Bicycle Route							
E. CIVIC SPACES (see Table 13)							* permitted within Open Spaces
Park							
Green			permitted			prohibited	
Square				permitted			
Plaza					permitted		
Playground							
F. LOT OCCUPATION							
Lot Width			60 ft. min	18 ft. min 96 ft. max	18 ft. min 180 ft. max	18 ft. min 700 ft. max	
Lot Coverage			60% max	70% max	100% max	100% max	
G. BUILDING DISPOSITION							
Front Setback			24 ft. min	6 ft. min 18 ft. max	0 ft. min 12 ft. max	0 ft. min 12 ft. max	
Side Setback			12 ft. min	0 ft. total min	0 ft. min 24 ft. max	0 ft. min 24 ft. max	
Rear Setback			12 ft. min	3 ft. min *	3 ft. min *	0 ft. max	
H. BUILDING TYPE (see Table 9)						* or 15 ft. from center line of alley	
Edgeyard			permitted		prohibited		
Sideyard				permitted		prohibited	
Rearyard				permitted	permitted		
I. PRIVATE FRONTAGES (see Table 7)							
Common Yard				prohibited			
Porch & Fence			permitted		prohibited		
Terrace or L.C.				permitted		prohibited	
Forecourt				permitted			
Stoop				permitted			
Shopfront & Awning				permitted			
Gallery				permitted			
Arcade					permitted		
J. BUILDING HEIGHT (see Table 8)							
Principal Building			3 stories max	4 stories max, 2 min	6 stories max, 2 min	8 stories max, 2 min	
Outbuilding			2 stories max	2 stories max	2 stories max	not applicable	
K. BUILDING FUNCTION (see Table 10 &11)							
Residential				limited use	open use		
Lodging				limited use	open use		
Office			restricted use	limited use	open use		
Retail			restricted use	limited use	open use		

DESIGN | DISPOSITION | FUNCTION

The conceptual build-out of the Smart Growth Plan includes a of 2,492,000 square feet of commercial space (office and retail) and 1,233 units of housing (single and multifamily, both for sale and rent). These numbers more than double the existing commercial space and residential units currently in the plan area, which would yield thousands of new residents and workers and more than double the tax revenues for the area. Factoring out existing development, the Smart Growth Plan yields a net capacity of 1,583,069 square feet of commercial space and 763 units of housing. The tables on the page that follow show the proposed development details for the concept plan as well as the tax revenue impact of this development for the study area and the City.

The projected absorption rate for each use type is as follows:

- *Office:* The net annual absorption of space in the I-385 corridor submarket included 57,867 square feet in 2003, 155,996 in 2004, and 180,356 in 2005, resulting in an average of 131,400 square feet per year in the Germantown area. (Source: CoStar Group Inc.)

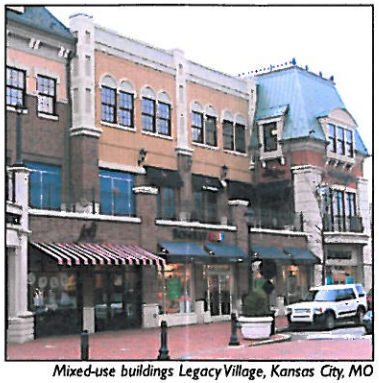
- *Retail/Other:* Since annual absorption in the "build-to-suit" format depends upon the users, the specific annual absorption rate will vary. Based upon per capita income and retail projections, approximately 120,000 square feet per year may be absorbed.

- *Residential:* The total sales for residential units in Germantown in 2005 and 2006 were 794 units and 738 units, respectively. This results in an average of 766 units per year. Assuming a capture rate of 15%, 115 units or more per year can be absorbed in the study area.

The table at the lower right shows a breakdown of the different types of housing proposed in the plan. In general, these figures represent a conservative estimate of the Smart Growth Plan's potential for new housing over a period of seven years. Based upon market demand and citizen input, these housing types represent a mix of different options that reflect the many segments within the Germantown demographic from young professionals, to empty-nesters, to seniors, and students.

Based on feedback from charrette participants and demographic profiles, there is an unmet demand for these residential types in Germantown, especially those that offer an urban lifestyle. At present, almost no opportunities exist for such housing in the study area. Therefore, the City should encourage and allow for residential development that provides higher densities and walkable access to goods and services typical of urban environments.

	Germantown Smart Growth Plan Development Capacity & Absorption		
	New Development Per Plan	Average Annual Absorption Rate	Absorption Period
Office	1,387,800 s.f.	131,406 s.f.	10.5 years
Retail	1,104,200 s.f.	120,000 s.f.	9 yrs.
Residential	1,233 units	115 units	7 yrs.



Mixed-use buildings Legacy Village, Kansas City, MO

Detached two-story bungalow in Davidson, NC

Condominiums above shops in Atlanta, GA

Housing Product Recommendations for Smart Growth Plan

	Type & Style	Size & Number of Bedrooms	Number of Potential Units (New Net Units)
Single Family			
	Detached 1 Unit: Bungalow, Infill House	1,200-2,600 sf 3 or 4	13
	Detached 2 Unit Duplex: Bungalow, Infill House	1,000-1,500 2 or 3	20
Multi-Family			
	Attached 2-4 Units: Urban Mansion	1,000-1,500 sf 2 or 3	40
	Condominium 1 Level Flat: Multi-story, Urban	900-2,500 sf 2 to 4	115
	Condominium 2 Level Flat: Multi-story, Urban	900-1,500 sf 2 or 3	115
	Townhome 1 Level: Patio Home, Cottage	1,500-2,600 sf 2 to 4	105
	Townhome 2 Level: Rowhouse, Townhouse	1,200-2,400 sf 2 to 4	100
	Townhome 3 Level: Live-Work, Rowhouse, Townhouse	1,400-2,400 sf 2 to 4	40
Rental			
	Apartments: Garden Style, Multi-story	600-1,100 sf 1 to 3	125
	Lofts: Multi-story, Urban	600-1,100 1 or 2	90
Total			763

Source: Rose & Associates Market & Economic Study

Development Capacity Analysis

Block #	Single Family	Townhomes	Multi-Family	Office (sq ft)	Retail (sq ft)	Civic (sq ft)	Other	Parking	Lot Type	Remaining Bldg Appraised Value	Redeveloped Land Assessed Value	Notes
1	24	39	0	48,000	0	15,000	0	320	Surface	$0	$438,875	Owen Property: North Block - Adjacent to Germantown Village
2	9	0	0	97,800	0	0	0	295	Surface	$0	$206,700	Owen Property: West Block -- Triangle across Municipal Centre.
3	0	36	58	50,000	21,000	80,000		350	Deck	$0	$188,560	Municipal Center block
4	0	0	0	70,500	23,500	0	0	0	Surface	$5,662,400	$434,720	Exeter Mixed-Use
5	0	0	0	168,300	107,700	0	0	894	Surface/Deck	$0	$3,260,520	Saddle Creek North
6	0	100	670	522,000	442,500	0	0	5,030	Deck	$0	$12,535,440	Retail "SuperBlock"
7	0	0	0	0	172,000	0	0	564	Surface	$23,457,300	$2,657,520	Kroger Mixed-Use
8	0	67	212	174,600	305,000	0	0	2236	Surface/Deck	$13,033,600	$3,654,405	Arthur Tract
9	0	0	0	171,600	32,500	0	0	635	Surface	$752,200	$3,658,320	West Street- pedestrian addition
10	0	0	0	0	0	0	0	0	n/a	$46,545,700	$0	Hospital & Dogwood Lane
11	0	18	0	85,000	0	0	0	330	Surface	$7,958,400	$577,505	West Street South - OG
12	0	0	0	0	0	0	0	0	n/a	$535,600	$0	Episcopal Church Site
Totals	**33**	**260**	**940**	**1,387,800**	**1,104,200**	**95,000**	**0**	**10,654**				
Construction Value	$350,000	$250,000	$150,000	$150	$110	$200	$50					
Total Value	**$11,550,000**	**$65,000,000**	**$141,000,000**	**$208,170,000**	**$121,462,000**	**$19,000,000**	**$0**			**$97,945,200**	**$27,612,565**	
Estimated Employees				5,906	2,325							

PLAN		
	Predevelopment Land Value	**$145,991,900**
	Post-Development New Bldg Value	**$547,182,000**
	Remaining Building Value	**$97,945,200**
	Total Post-Development APPRAISED Value	***$791,119,100***

EXISTING		
	PreDevelopment Land Value	**$145,991,900**
	PreDevelopment Building Value	**$224,933,900**
	Total Pre-Development APPRAISED Value	***$370,925,800***
	PreDevelopment Assessed Land Value	**$45,157,645**
	PreDevelopment Assessed Bldg Value	**$69,524,270**
	Total Pre-Development ASSESSED Value	***$114,681,915***
	Existing Annual Tax Revenue	**$1,766,101.49**

Tax Increment Evaluation	
New Residential Bldg Assessed Value	$54,387,500
New Commercial Bldg Assessed Value	$131,852,800
Redeveloped Land Assessed Value	$27,612,565
New Development Assessed Value	**$186,240,300**
Remaining Area Assessed Value (Land + Bldgs)	**$47,908,092**
Total Post-Development Assessed Value	**$234,148,392**
Total Pre-Development Assessed Value	**($114,681,915)**
Net New Assessed Value	**$119,466,477**
Net New Annual Tax Revenue	**$1,839,784**
10 Year Return	$18,397,837
20 Year Return*	$41,395,134
**(with 2.5% annual growth after 10 years)*	

	Before	After	NET New Gain
Residential units	**470**	**1,233**	**763**
Commercial sq ft	**908,931**	**2,492,000**	**1,583,069**

New Public Buildings		
New City Hall Building	80,000	$16,000,000
New Fire Station Building	15,000	$3,000,000
(sq. ft.)	**95,000**	**$19,000,000**
Parking Decks (Super Block)		$42,126,250

Proposed Super Block Retail/Town Center			
Office (s.f.)	522,000	$150	$78,300,000
Retail (s.f.)	442,500	$110	$48,675,000
Commercial Bldg Appraised Value			**$126,975,000**
Apts	670	$150,000	$100,500,000
Townhomes	100	$250,000	$25,000,000
Residential Bldg Appraised Value			**$125,500,000**
Appraised Land Value			**$31,338,600**
TOTAL APPRAISED VALUE			**$283,813,600**
TOTAL ASSESSED VALUE			**$94,700,440**
Existing Conditions			
Existing Appraised Building Value			$37,093,400
Existing Appraised Land Value			$31,338,600
TOTAL APPRAISED VALUE			**$68,432,000**
Existing Assessed Building Value			$14,837,360
Existing Assessed Land Value			$12,535,440
TOTAL ASSESSED VALUE			**$27,372,800**
Before Tax Revenue			**$421,541**
After Tax Revenue			**$1,458,387**